

Figure 1

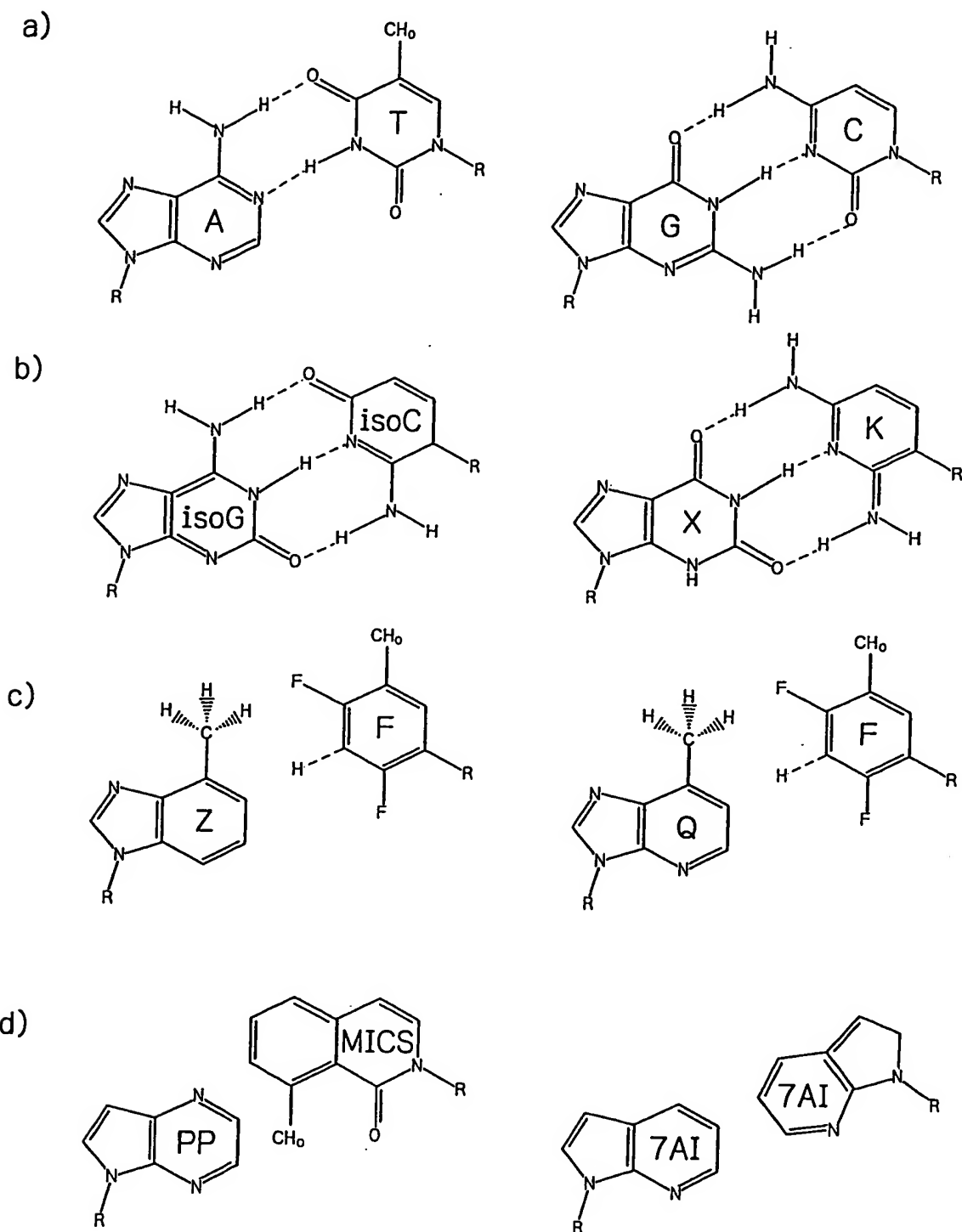


Figure 2

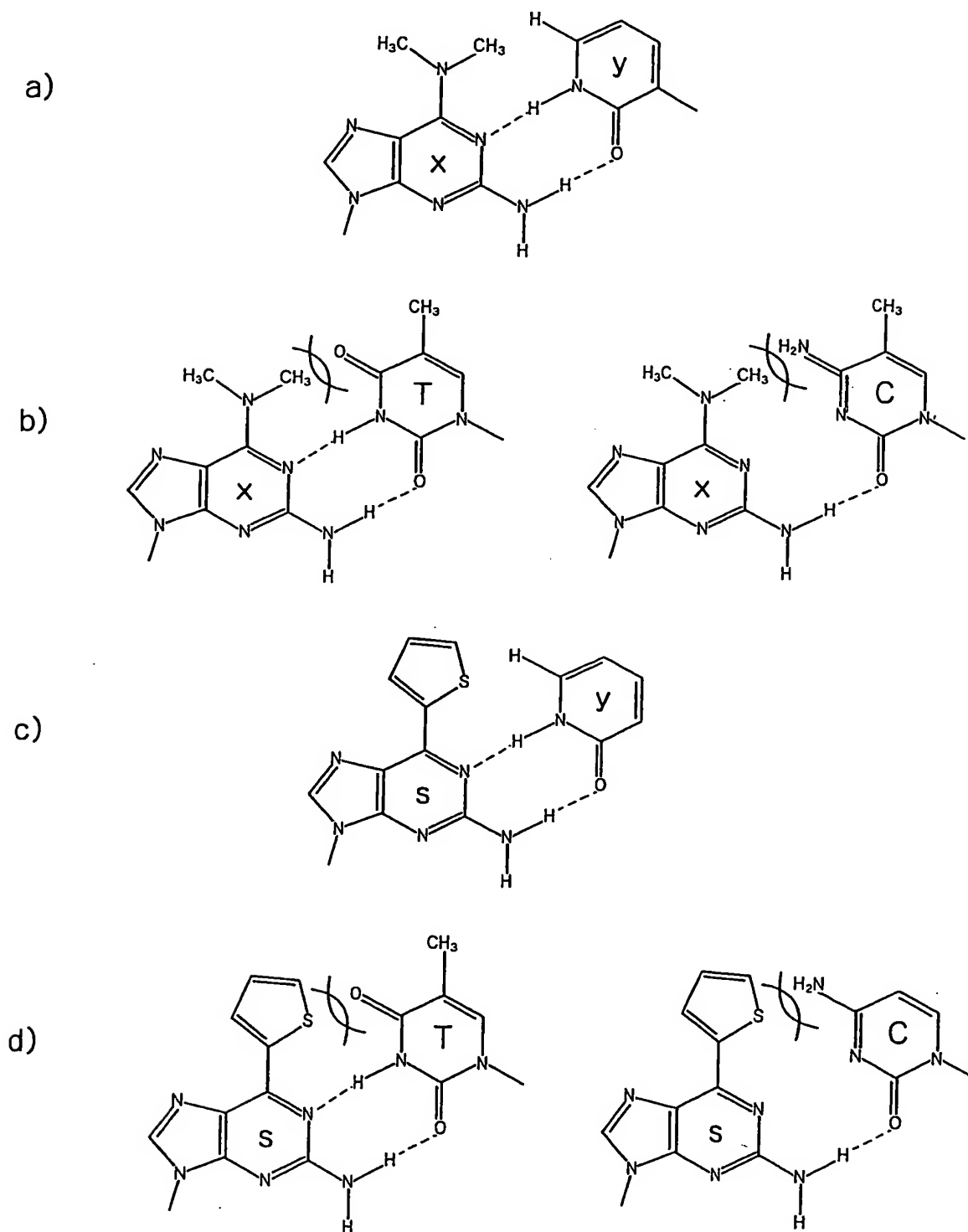
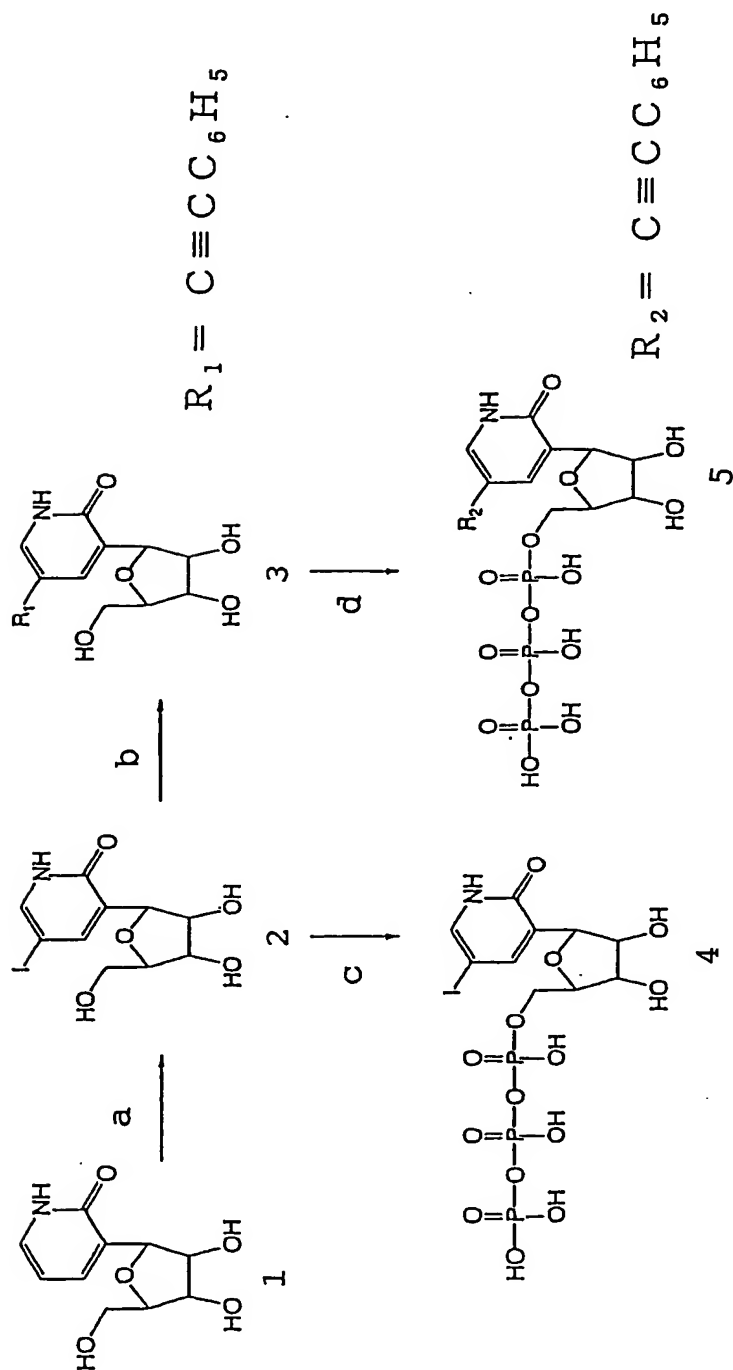


Figure 3



(a) $\text{I}_2, \text{KI}, \text{Na}_2\text{CO}_3, 100^\circ\text{C}, 4\text{h}$. (b) $\text{CF}_3\text{CONHCH}_2\text{CCH}, \text{Pd}(\text{Ph}_3\text{P})_4, \text{CuI}, \text{Et}_3\text{N}, \text{DMF}, \text{rt}, 4-6\text{h}$.
 (c) (1) $\text{POCL}_3, (\text{CH}_3\text{O})_3\text{PO}, 0^\circ\text{C}, 2\text{h}$. (2) $(n\text{-Bu}_3\text{NH})_2\text{P}_2\text{O}_7, 0^\circ\text{C}, 10\text{min}$. (d) (1) $\text{POCL}_3, 1, 8\text{-bis}(\text{dimethylamino})\text{naphthalene}, (\text{CH}_3\text{O})_3\text{PO}, 0^\circ\text{C}, 2\text{h}$. (2) $(n\text{-Bu}_3\text{NH})_2\text{P}_2\text{O}_7, 0^\circ\text{C}, 10\text{min}$.
 (3) $\text{conc. NH}_4\text{OH}, \text{rt}, 10\text{h}$.

Figure 4

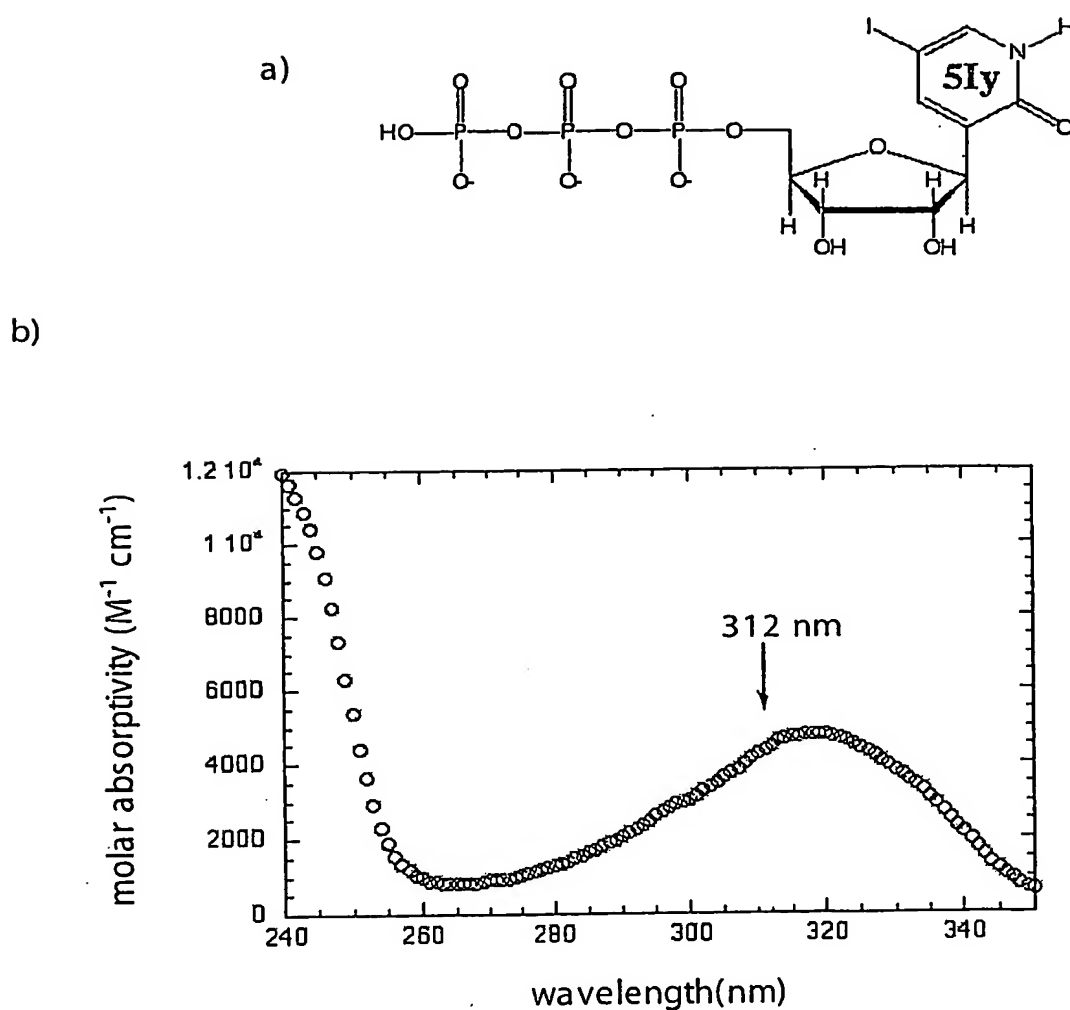


Figure 5

a)

5'-end primer; 39-mer

39.45 : 5' -GGTAATACGACTCACTATAGGGAGTGGAGGAATTCATCG

3'-end primer; 29-mer

29.45 : 5' -GCAGAAGCTTGCTGTCGCTAAGGCATATG

29.45s84 : 5' -GCAGAAGCTTGCTGTCsCTAAGGCATATG

29.45s87 : 5' -GCAGAAGCTTGCTsTCGCTAAGGCATATG

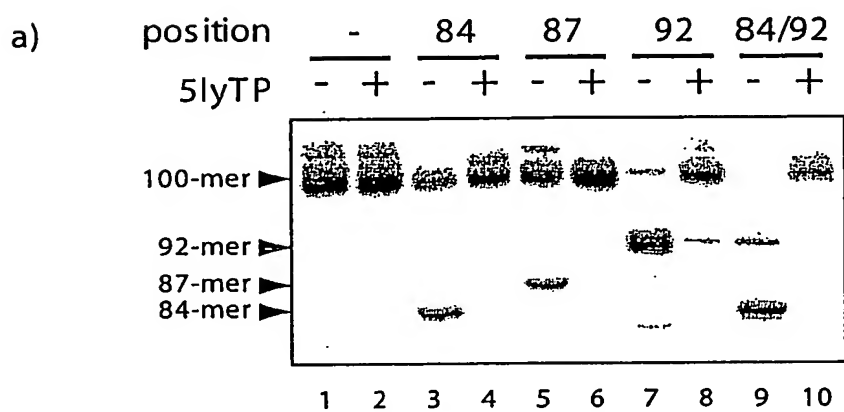
29.45s92 : 5' -GCAGAAGCsTGCTGTCGCTAAGGCATATG

29.45s84/92 : 5' -GCAGAAGCsTGCTGTCsCTAAGGCATATG

b)

5' - GGGAGUGGAG GAAUUCAUCG AGGCAUAUGU CGACUCCGUC UCCCUUCAA
 CCAGUUUAAA AUUGGUUUUA GCAUAUGCCU UAGCGACAGC AAGCUUCUGC

Figure 6



b)

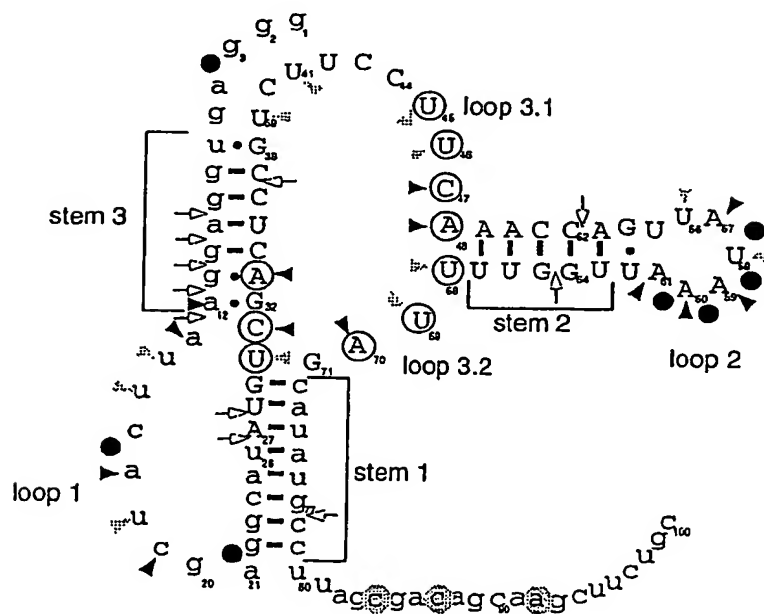


Figure 7

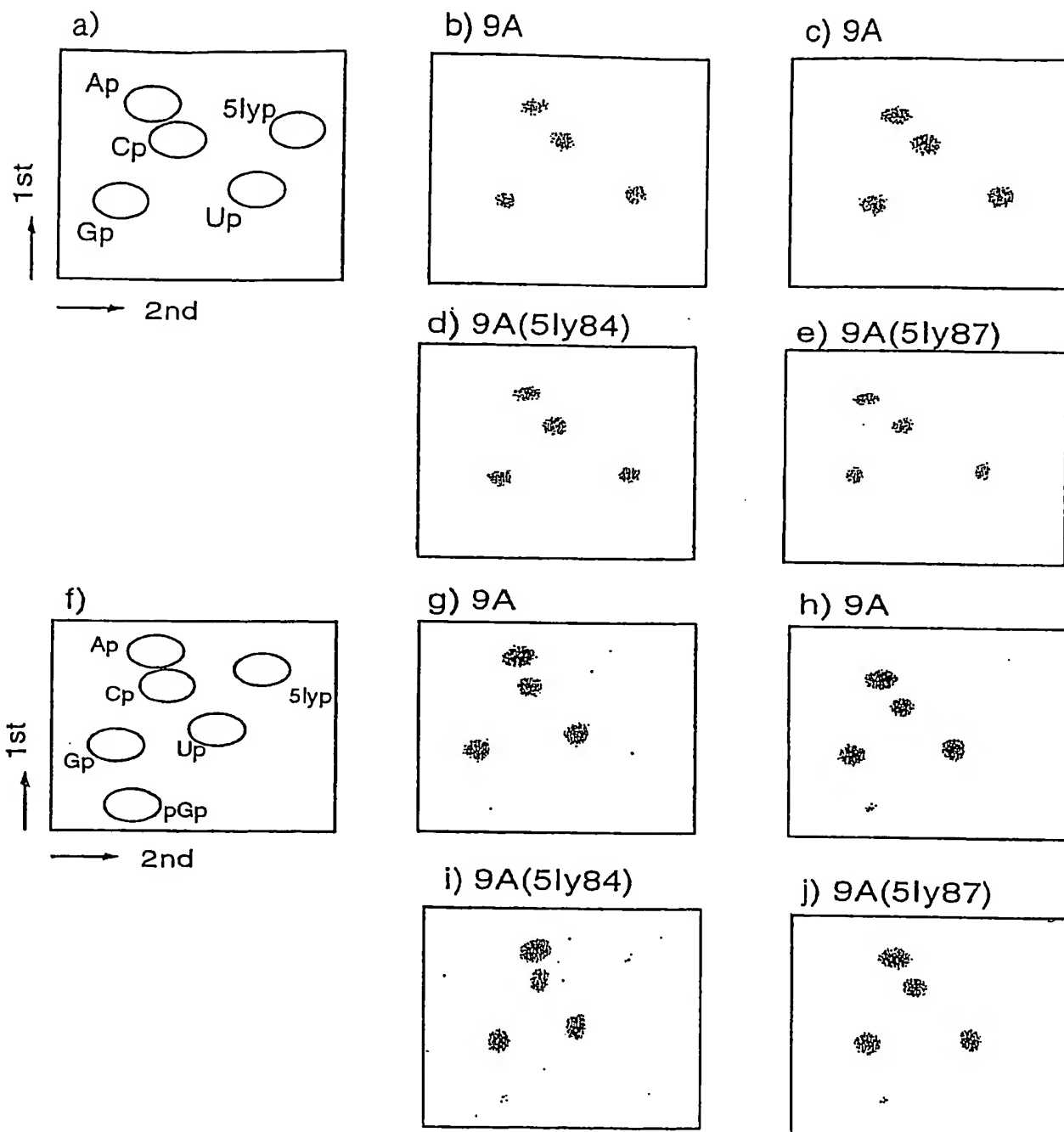


Figure 8

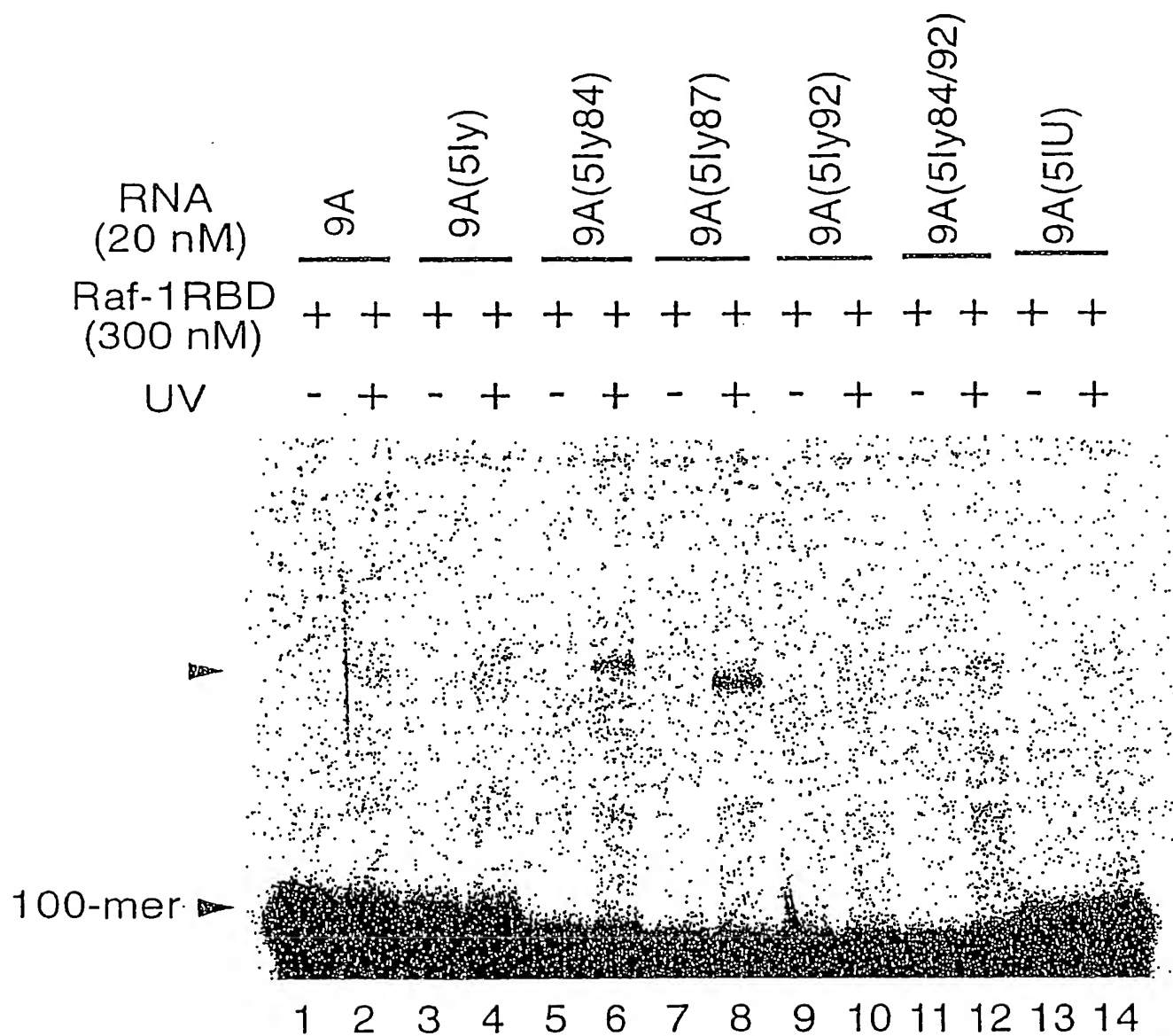


Figure 9

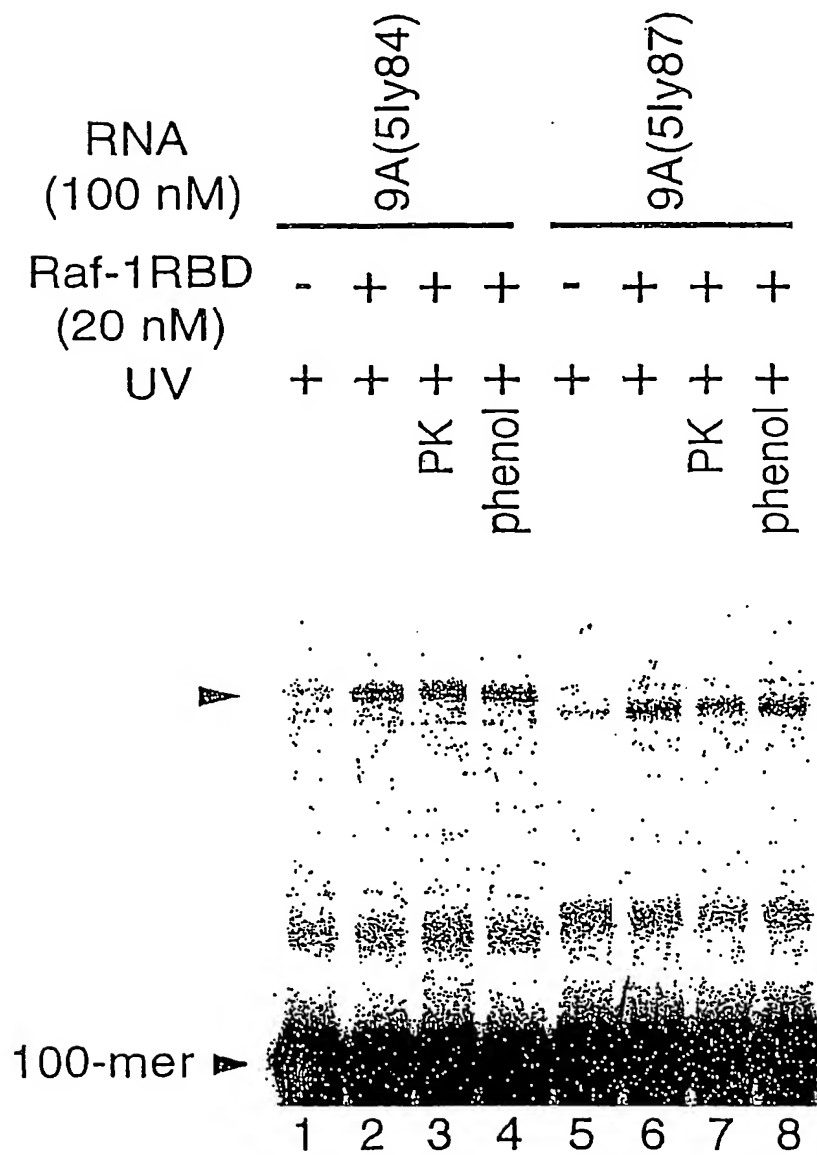
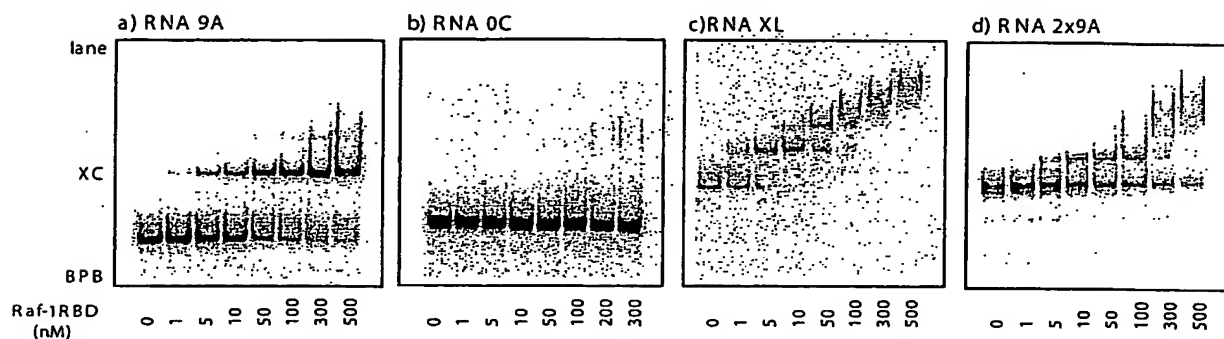


Figure 10



- e) RNA 9A :100-mer
5' -GGGAGUGGAGGAAUUCAUCGAGGCAU [-N₄₅-] CAUAUGCCUUAGCGACAGCAAGCUUCUGC-3'
AUGUCGACUCCGUCUCCUCAAACCAGUUAUAAAUUGGUUUUAG
- RNA 9A(5ly87) :100-mer
5' -GGGAGUGGAGGAAUUCAUCGAGGCAU [-N₄₅-] cauaugccuuagcga5IyCAGCAAGCUUCUGC-3'
- RNA 2x9A :200-mer
5' -GGGAGUGGAGGAAUUCAUCGAGGCAU [-N₄₅-] CAUAUGCCUUAGCGACAGCAAGCUUCUGC-
-GGGAGUGGAGGAAUUCAUCGAGGCAU [-N₄₅-] CAUAUGCCUUAGCGACAGCAAGCUUCUGC-3'
- RNA 0C :100-mer
5' -GGGAGUGGAGGAAUUCAUCGAGGCAU [-N₄₅-] CAUAUGCCUUAGCGACAGCAAGCUUCUGC-3'
CUGGGAACCCUAUCUUGCUUUUGGUAGCUGUAUUCACCUGUAAACAG
- RNA XL : cross-linking product generated from two molecules of 9A(5ly87)

Figure 11

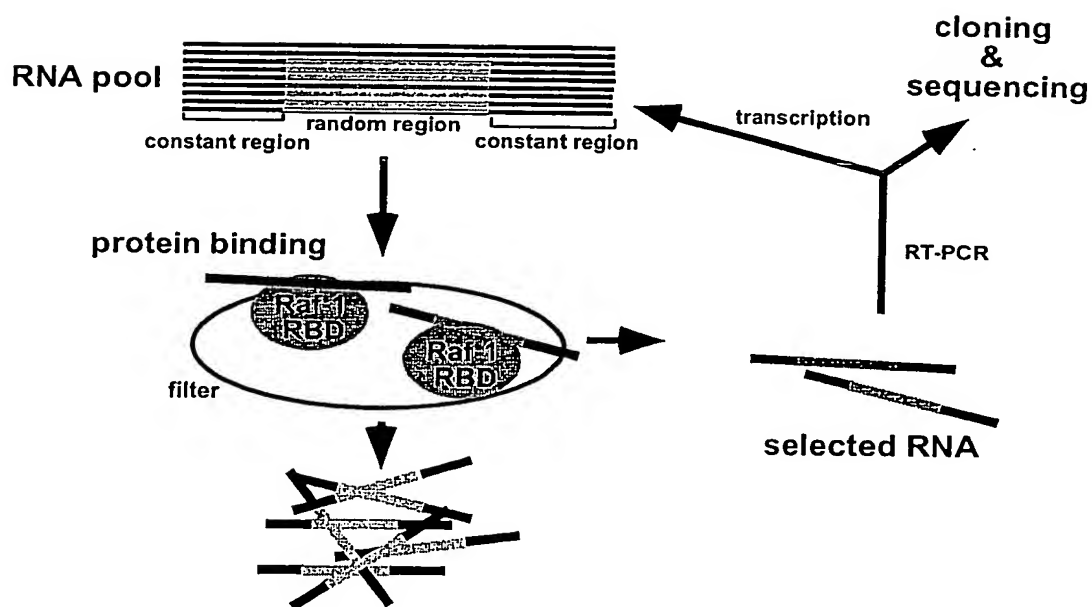


Figure 12

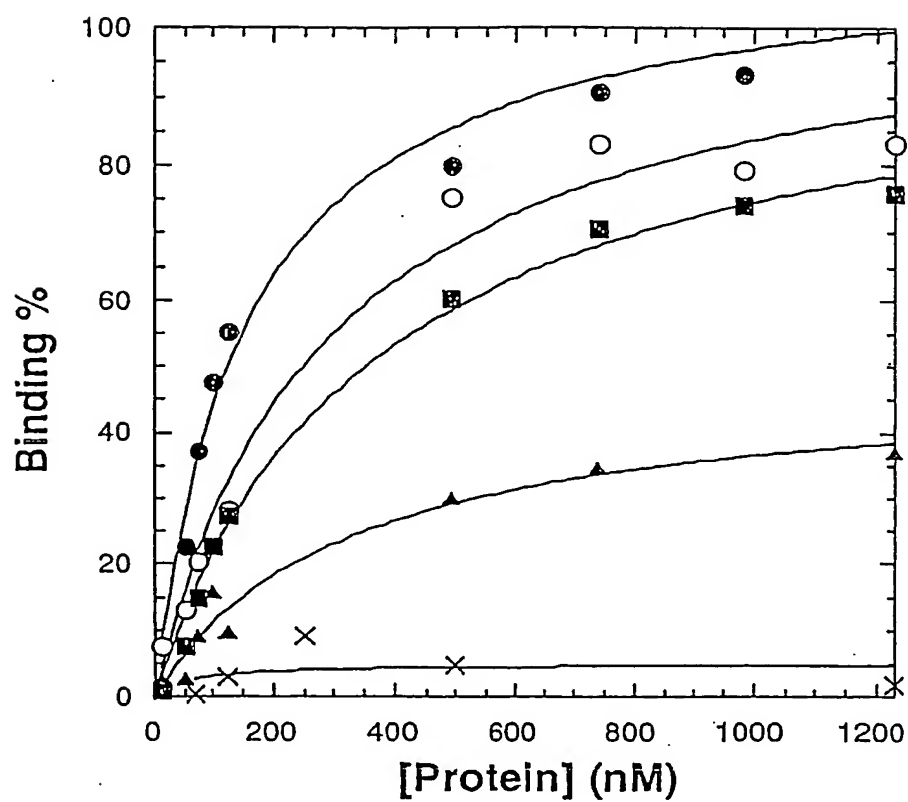


Figure 13

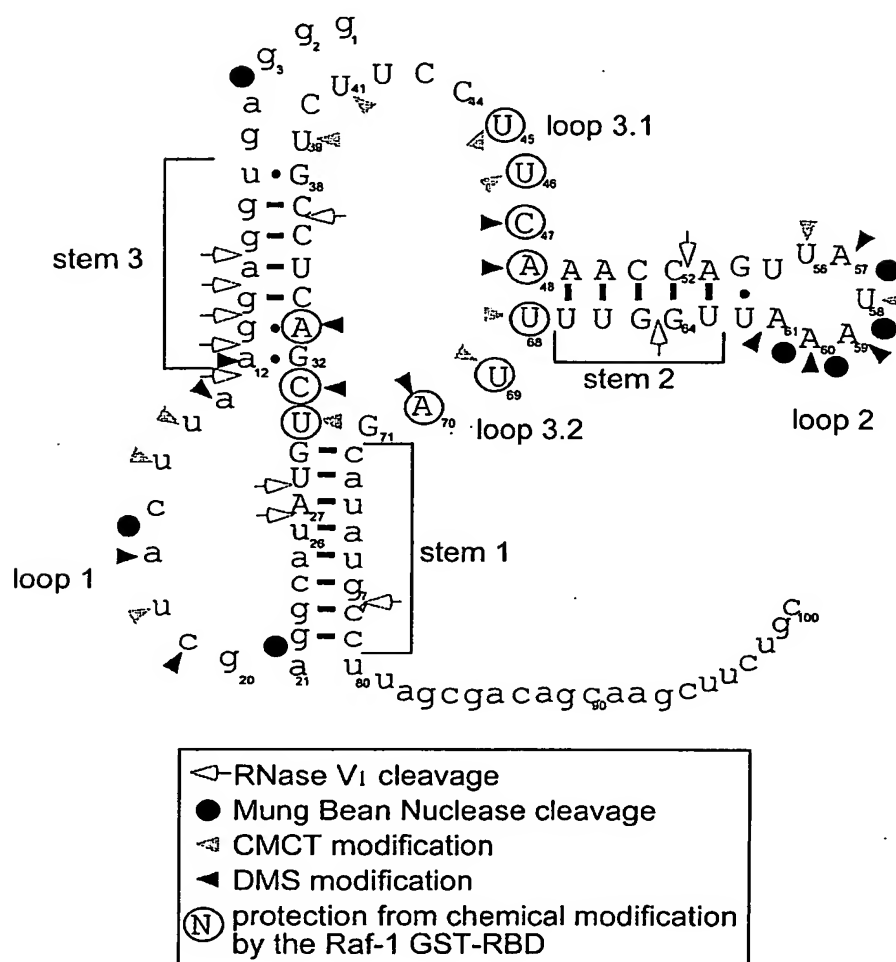
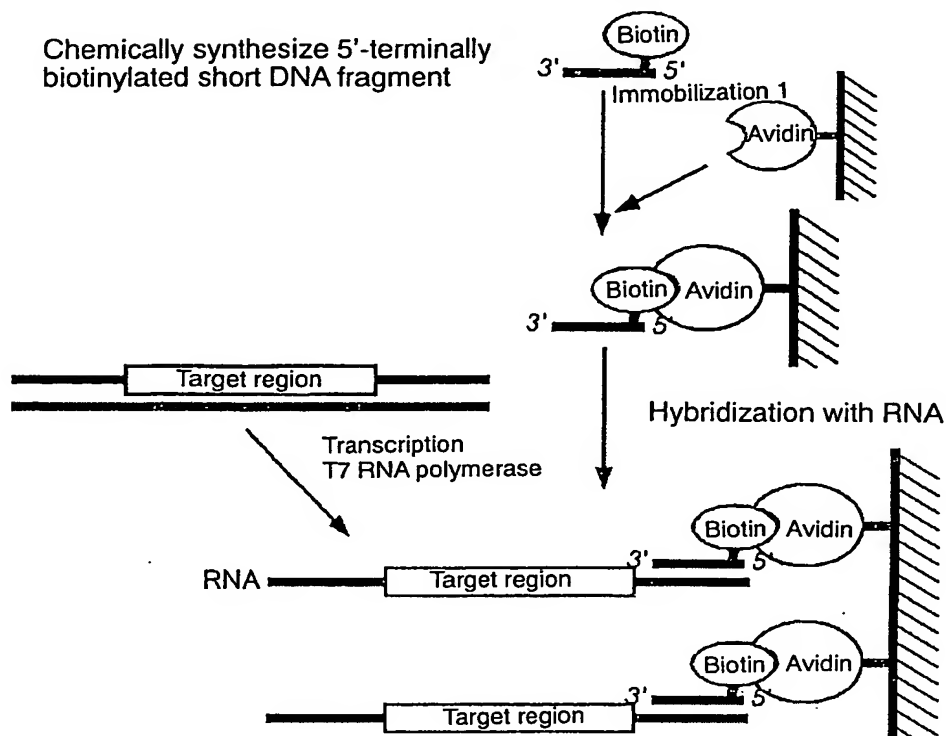


Figure 14

Conventional Method 1



Conventional Method 2

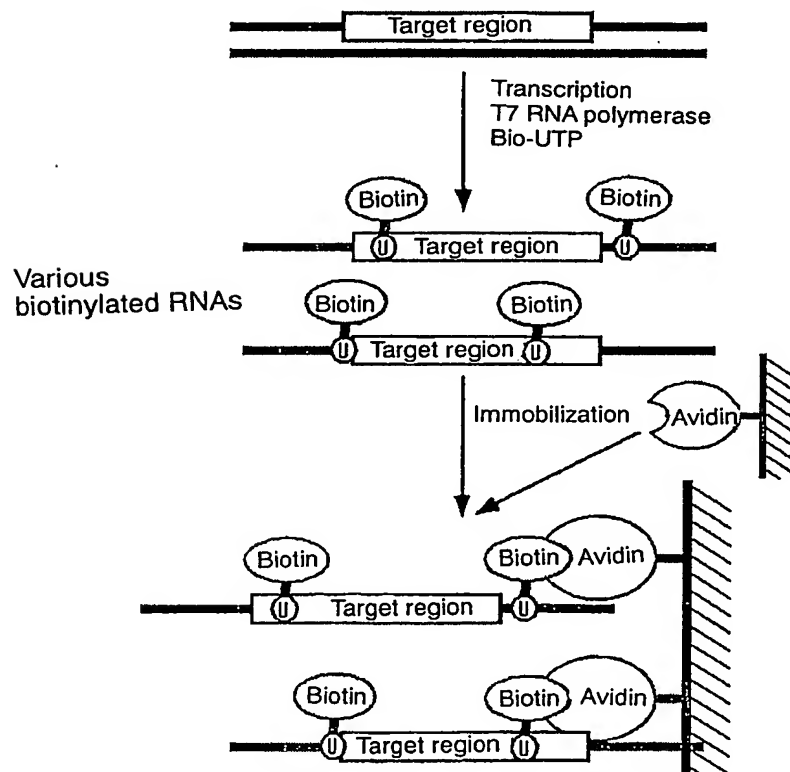
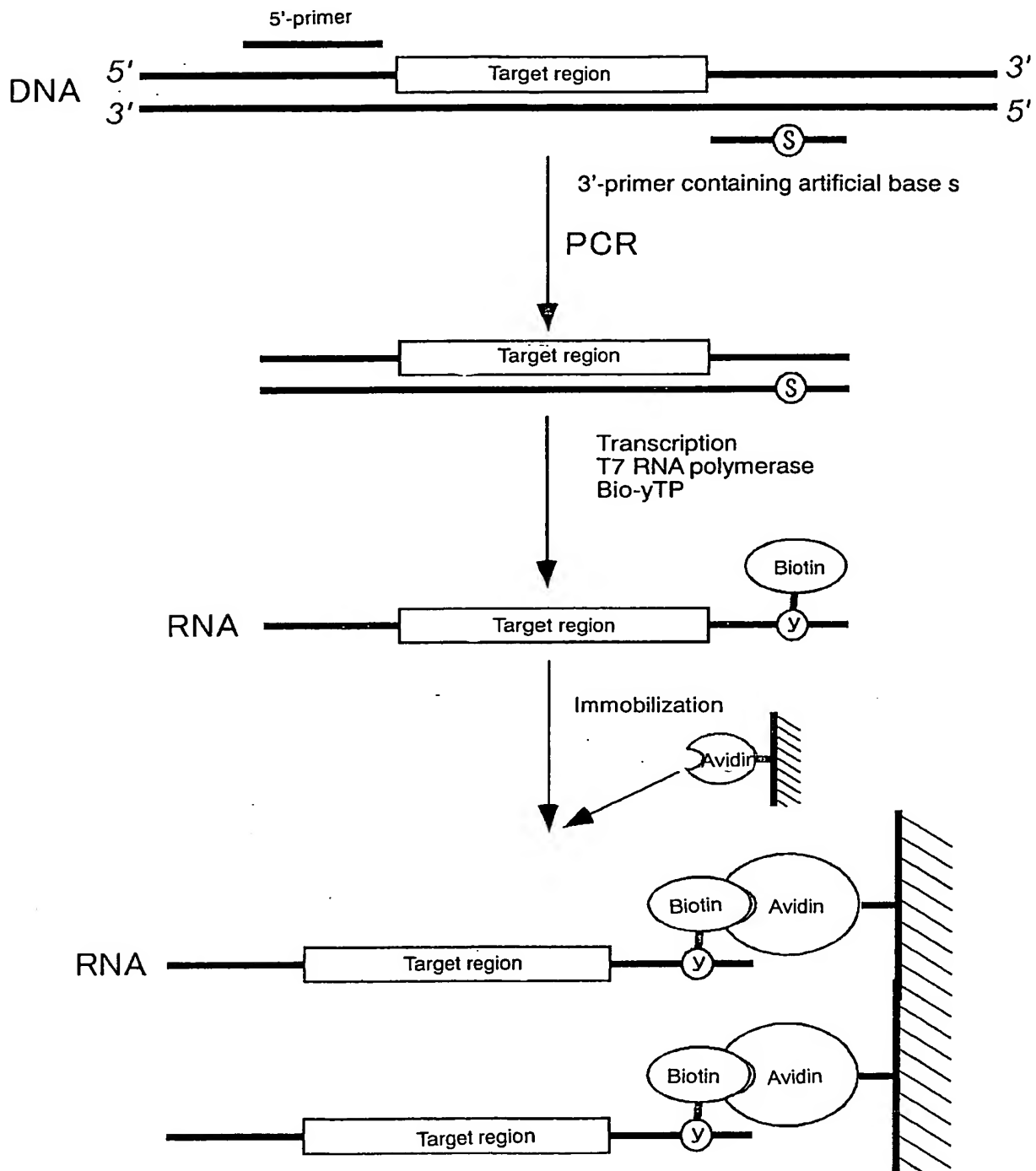


Figure 14 (Continued)

Inventive Method based on artificial base pairing



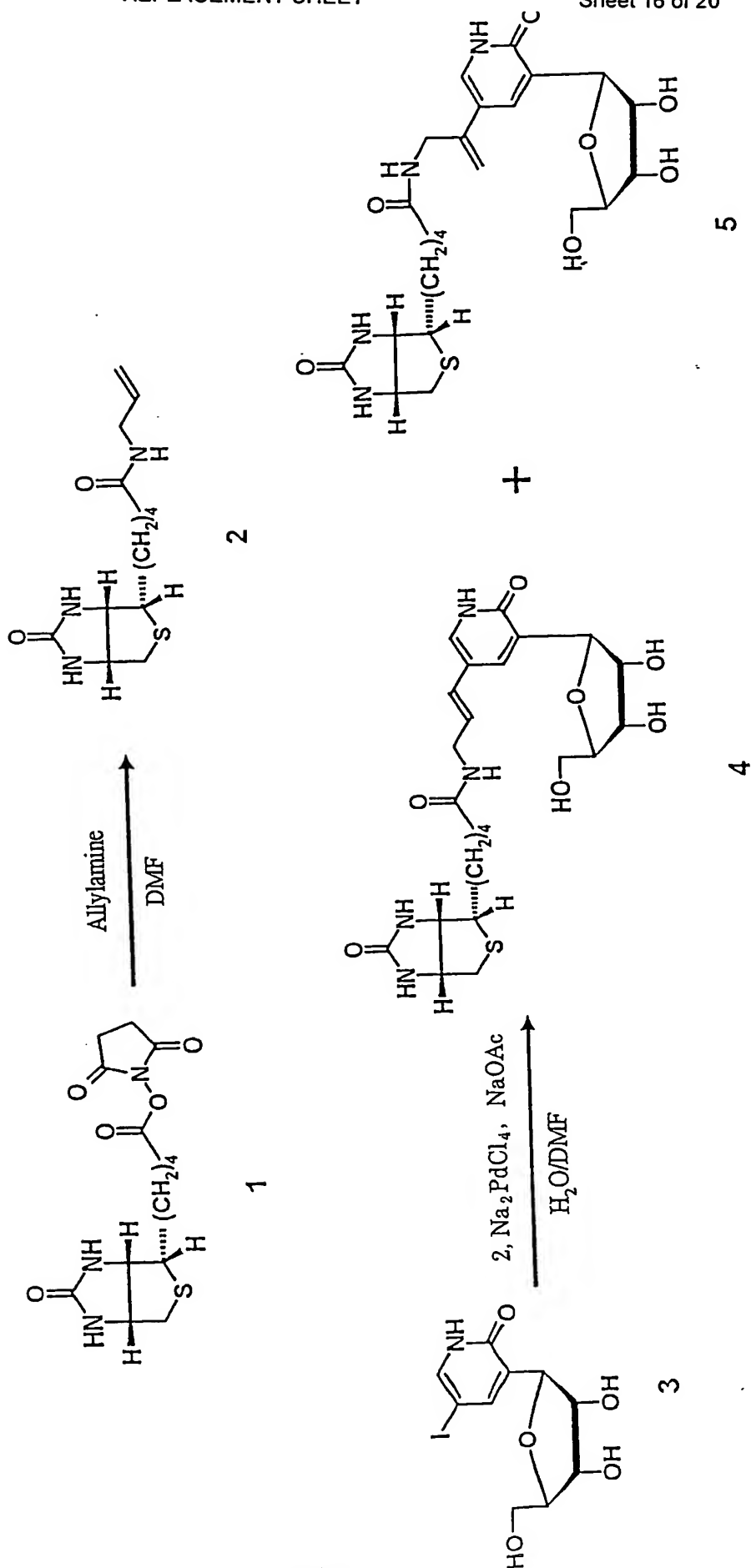


Figure 15

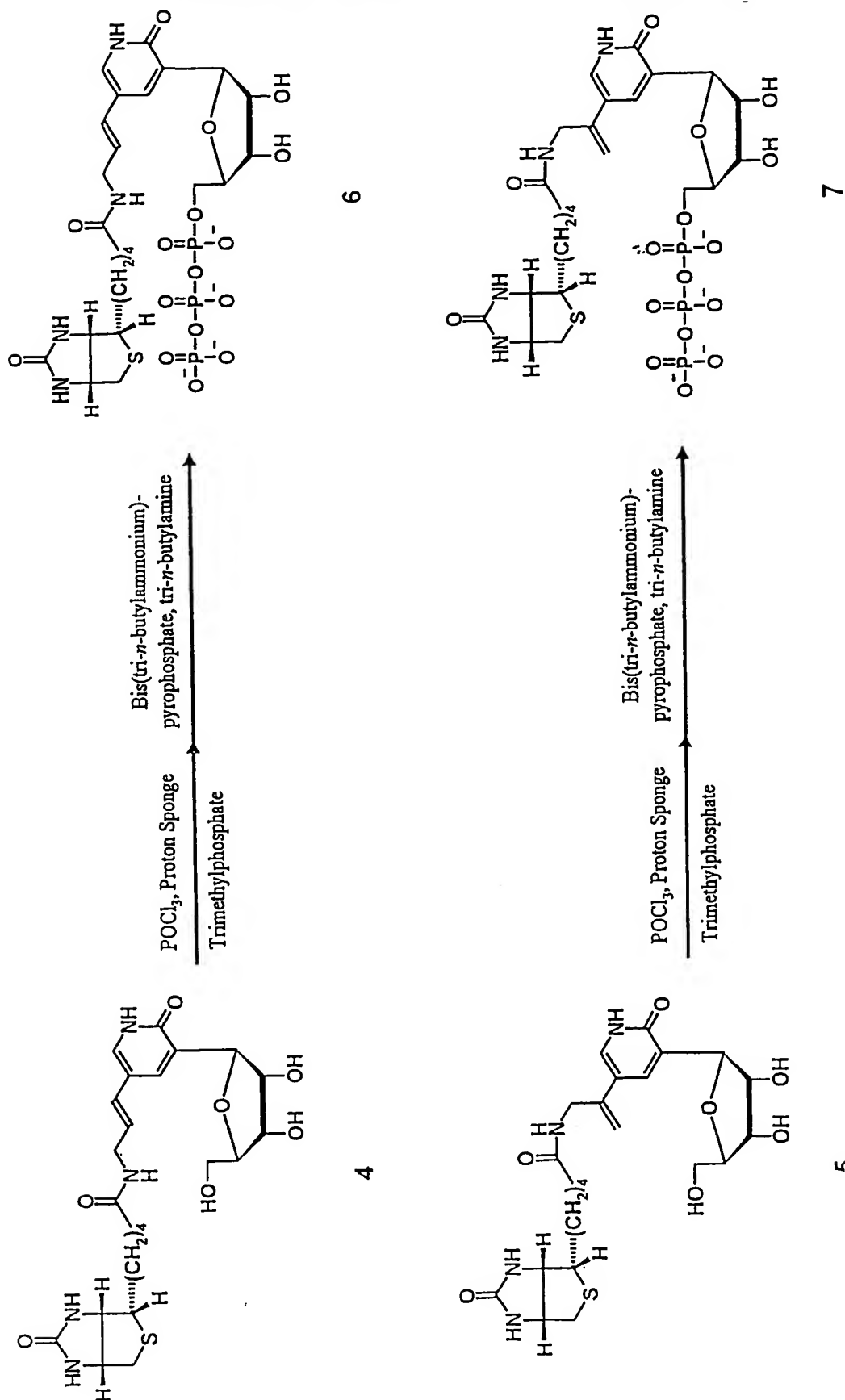


Figure 16

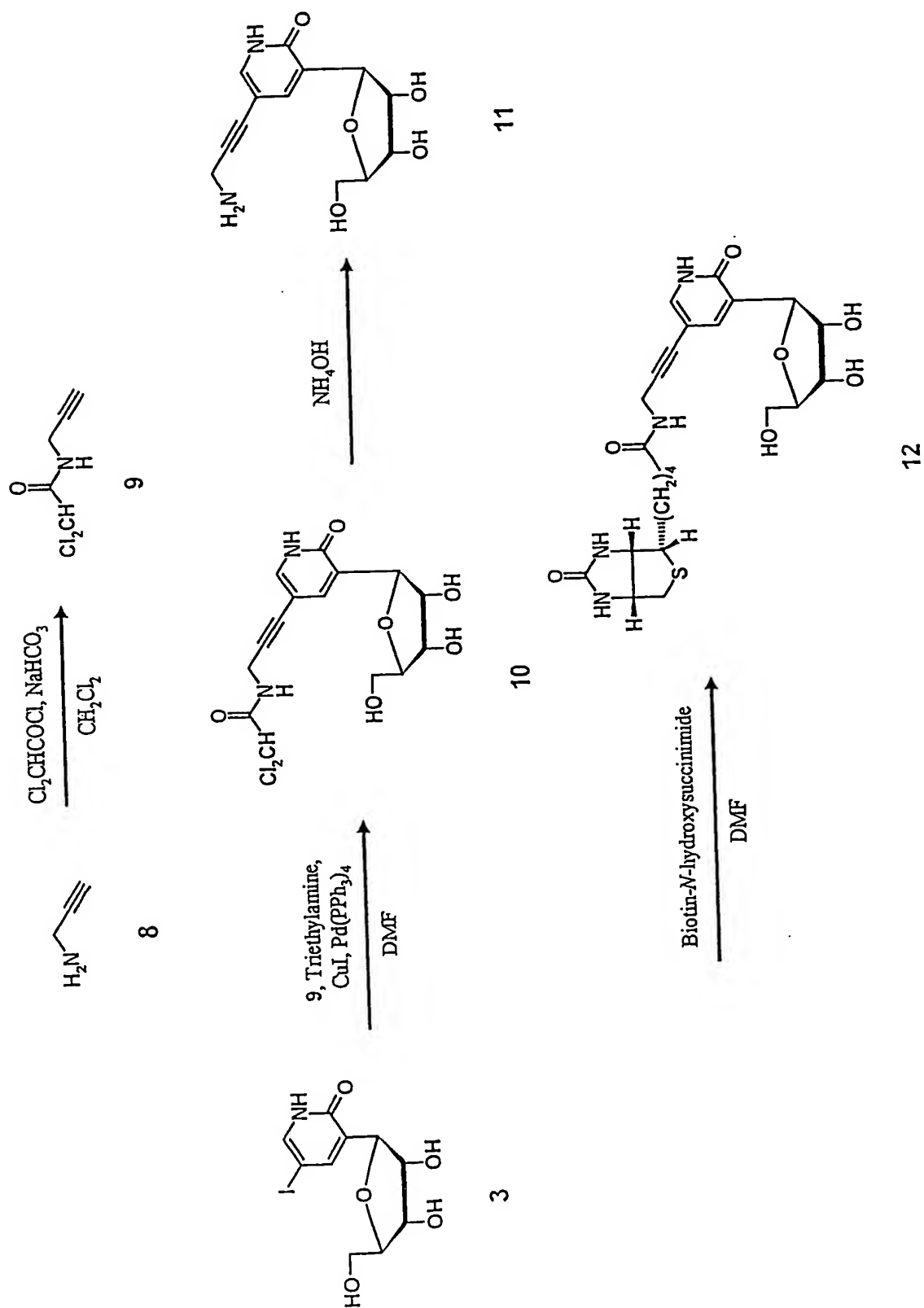


Figure 17

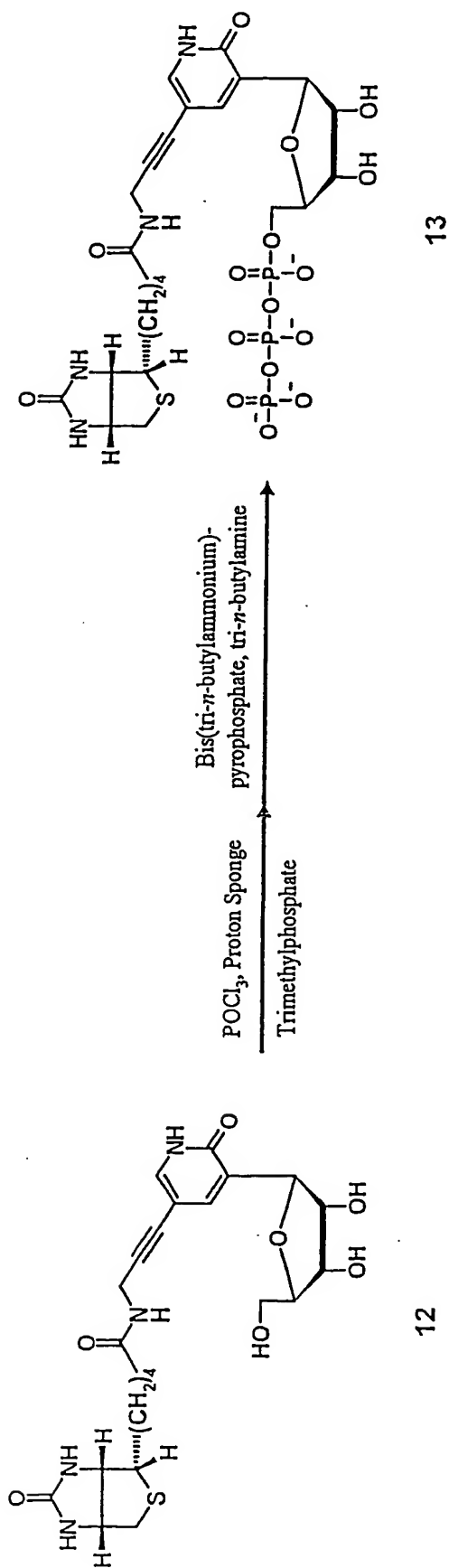


Figure 18

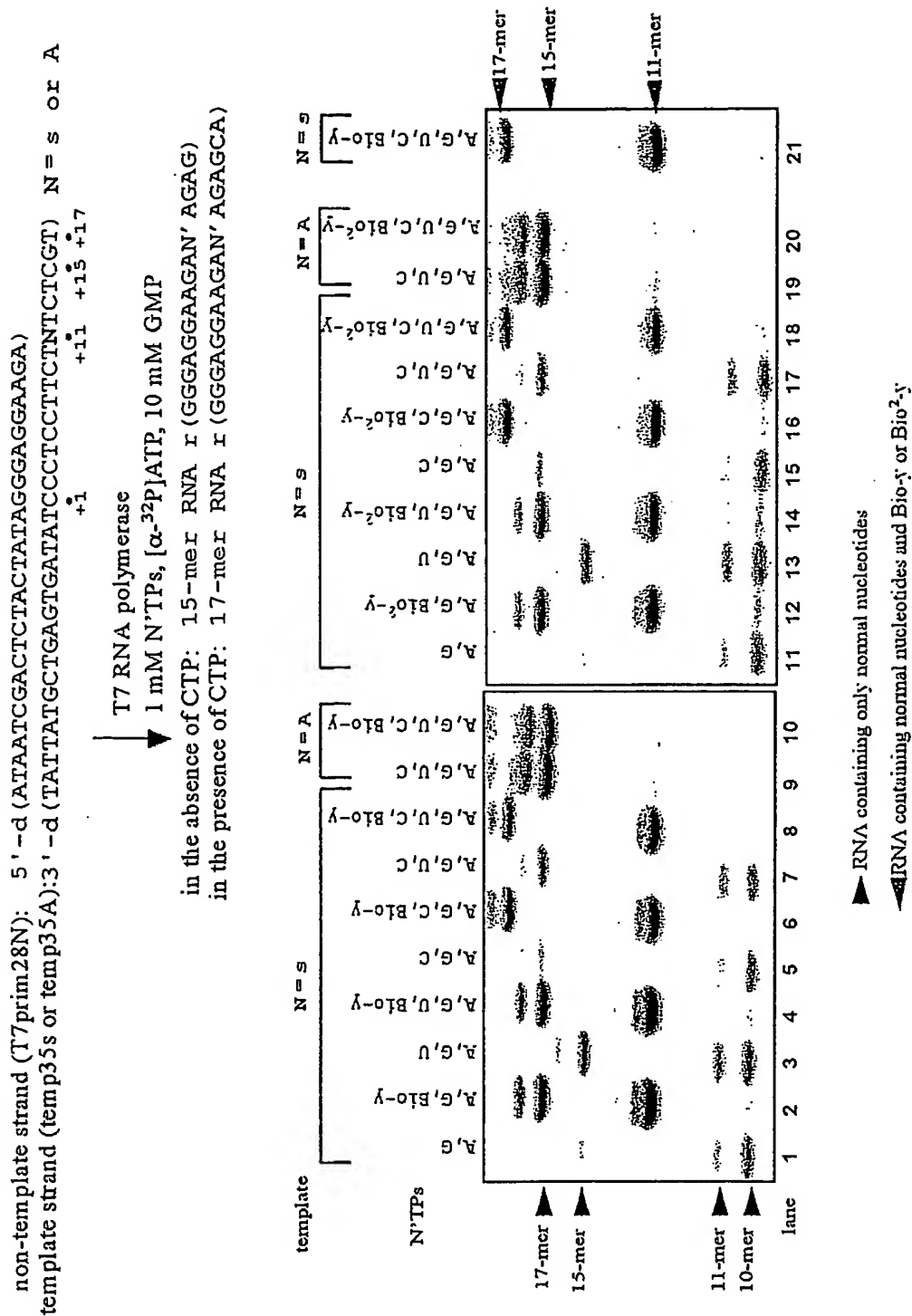


Figure 19